

AMERICAN

FEBRUARY • 1953

# Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

THEATRE  
TELEVISION  
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AMATEUR




In This Issue . . .

- New Stereo Filming Equipment
- Set Lighting For Pictorial Effects
- The "Fluid" Camera in Cinematography

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AMERICAN

# Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY  
PUBLICATION OF AMERICAN SOCIETY OF CINEMATOGRAPHERS

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### ON THE COVER

ANOTHER MAJOR 3-D color production gets under way in Hollywood with Karl  
Soren, A.S.C., (left) directing the photography. The Sel Lerner production was  
photographed with the Stereo-Cine Corporation's 3-D equipment, which is being  
created two color 35mm cameras. Showing initial use of the company's  
equipment is a major production in Raphael G. Wolf (right) and, president  
of Stereo-Cine Corporation, Hollywood—Plans by Gordon Langer

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## Hollywood Bulletin Board

**DIRECTORS OF PHOTOGRAPHY** of the Hollywood motion picture studios, in a preliminary balloting, have selected ten black-and-white and ten color productions of 1952 as candidate entries for Academy Award nominees for photographic achievement awards.

Nomination ballots were mailed to all directors of photography on January 15th and they will now vote to select the five films in each class as this year's award nominees. Result of nominations balloting will be announced by the Academy through the nation's press on February 10th.

The twenty candidate-films and the directors of photography who filmed them are as follows:

### BLACK-AND-WHITE PRODUCTIONS

"Andromeda And The Lost," Harry Spaulding, ASC, (RKO)  
 "The Bad And The Beautiful," Robert Sartees, ASC, (MGM)  
 "The Big Sky," Russell Harlan, ASC, (Fox).

"High Noon," Floyd Cusby, ASC, (Kramer)

"My Cousin Rachel," Joseph LaShelle, ASC, (Fox).

"Navajo," Virgil Miller, ASC, (Lip print).

"Pat and Mike," William Daniels, ASC, (MGM).

"Sudden Fear," Charles Lang, ASC, (Kaufman-RKO).

"The Thief," Sam Levenson, (Popcorn-United Artists).

"Viva Zapata," Joseph MacDonald, ASC, (Fox).

### COLOR PRODUCTIONS

"Blackboard The Pirate," William Snyder, ASC, (RKO).

"Hans Christian Andersen," Harry Spaulding, ASC, (Goldwyn).

"Invitation," Frederick A. Young, ASC, (MGM).

"The Jazz Singer," Carl Guthrie, ASC, (Warner Bros.).

"The Merry Widow," Robert Sartees, ASC, (MGM).

"Million Dollar Mermaid," George Folmer, ASC, (MGM).

"Muslin Rouge," Ossy Morris, (Renaissance Films).

"Prisoner Of Zenda," Joseph Ruttenberg, (MGM).

"The Quiet Man," Winston Hoch, ASC, (Argosy-Republic).

"The Snows Of Kilimanjaro," Leon Shamroy, ASC, (Fox).

The five productions selected in each classification is the nominating ballot-

ing will be reported here next month.

In the meantime, the Academy is proceeding with its plans to hold the presentation ceremonies the evening of March 19, at the Hollywood Pantages Theatre.

**ARTHUR MULLER, ASC**, three-time Academy Award winner and photographer of more than 150 Hollywood productions, was given an honorary membership last month by Delta Kappa Alpha, national honorary camera fraternity, at the University of Southern California.

**GLEN KERSHNER, ASC**, retired cinematographer turned author, is completing plans to retire permanently to Tahiti, where he spent many months a few years ago photographing motion pictures and gathering material for his book on the South Seas.

**THREE-DIMENSION MOVIES** currently are a "hot" item with every major studio. Following box-office success of Arch Oboler's "Evans Devil" and the successful presentation of Cinema, nearly every major studio either has begun production on its initial 3-D film or plans to do so very shortly.

Studios include Metro-Goldwyn-Mayer, Twentieth Century Fox, Warner Brothers, Columbia, and Universal-International. Columbia and Warner reportedly will use Milton Canaberg's Natural Vision stereo camera, which were employed by Oboler in his initial 3-D production. Universal is reported as building its own 3-D camera equipment, based on a different arrangement than that of Natural Vision.

Twentieth Century-Fox has completed tests in its own third dimension process.

In the meantime, Sol Lesser, using 3-D camera equipment of a newcomer in the field, Stereo-Cine Corp., began his initial theatrical production in color and 3-D at RKO-Pathe studios last month, as reported elsewhere in this issue.

Meantime, the activity in 3-D production has been going intense study by the industry's craft unions to determine whether demands should be made for increased crews, and to more sharply define the activities of such crew men as camera operators and assistants. At the present time, the cameramen's union is requiring the addition of another

(Continued on Page 89)

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## WHAT'S NEW in equipment, accessories, service

**Camera Battery Pack**—Per Products Corp., 926 No. Cahuja Ave., Hollywood 36, Calif., announces a new, lightweight DC storage battery pack for operation of motion picture cameras equipped with PAR 12-v. universal motor drives. Unit can also be used as a power source for other 12-v. camera motor drives.



Batteries are in a compact case, easy to carry and use. Other noteworthy features are: long life, ample power for speeds up to 54 fps, and a power selector which allows the motor to draw from the battery only the power required to operate the camera. This insures even discharge of battery cells. An integral charger unit is available at slight additional cost.

**Portable Mike Boom**—National Cine Equipment, Inc., 209 W. 48th St., New York, N. Y., announces a lightweight, collapsible portable microphone boom for studio and location work. Boom telescopes approximately 7 to 17 feet. A balance weight at rear is adjustable for



extension of boom. Remote control permits operator to both adjust the boom and rotate the microphone. A control extension permits the same convenient operation even when boom stand is elevated to maximum height.

Other features include: oversize friction boom clutch; outside suspension of take table by clips; 1½-inch threaded microphone mounting stud; boom dolly in two sections, having collapsible legs and ball-bearing wheels.

**Improved Film Cement**—The Kalam Co., Plainville, Conn., announces a new improved formula for its, Casig Safety Film cement known as Formula #7, new cement will splice film regardless of type of base. It is fast drying, does not deteriorate, and excess cement is easier to clean from film surface. One-oz. bottle of the cement sells for 50c.

**New Remote Mixer**—Stanell Hoffman Corporation, 521 No. Highland Ave., Hollywood 38, Calif., offers a versatile remote sound mixer for motion picture and TV film production. To accommodate the various requirements of post-synchronization, the model AM-3 mixer



uses small plug-in preamplifiers which are available in a wide range of impedances and gain. Four track pre-amps may be used. The unit is complete with AC power supply, microphone and talk back, plus facilities for AC and DC operation. Additional data may be had by writing the company.

**CBC Distributes Magnascope**—Camera Equipment Company, 1605 Broadway, New York City, has been appointed regional distributor of the Magnascope synchronous magnetic film recorder, product of Magnascope, North Hollywood, Calif.

Recorder, noted for its low price of \$1275, is available for use with 16mm 35-perforated film, 16mm single-perforated film, or 17½mm film.

Medium portability, extreme light  
(Continued on Page 89)



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- Easily detachable matte box-finder holder.



William H. Clothier, ASC  
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**ARRIFLEX 35"**

writes **WILLIAM H. CLOTHIER, ASC**

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JOSEPH LASHELLE, ASC, one of 19th Century-Fox's top cinematographers, displays in "My Cousin Rachel" his craft camera with three "Lashes," for which he won an Academy Award in 1954

Artful photography enhances the mood and character of . . .

## 'MY COUSIN RACHEL'

By HERB A. LIGHTMAN

**F**OR SHEER PHOTOGRAPHIC artistry "My Cousin Rachel," produced by 20th Century-Fox, represents Hollywood craftsmanship at its best. It is no mere glossy bit of technique, but a visually fabulous portrayal of a dramatic story which takes place on the rugged coast of Cornwall around 1840. Cinematographer La Shelle and Director Henry Koster, working in smooth harmony, have created so strikingly honest an atmosphere of time and place practically that it smacks not at all of the "hack lot," as so many period films unfortunately do.

"Rachel" is primarily a film of mood and character—the story of a young man (played by dynamic British newsmen Richard Burton), seduced by a beautiful widow who is brilliant and half-devil (both halves played to the hilt by two-time Oscar-winner Olivia de Havilland). Frying in the deep fat of passion, he gives her his entire fortune—then, in a fury of unrequited love, leads her to her death. We last see him brooding by the sea, still wondering whether she actually was an angel or Evil incarnate.

The force of this off-beat dramatic story stems not only from superior direction and top notch performances, but from the violent, brooding atmosphere of the wild Cornwall coast as re-created by actual lighting and outstanding camerawork. This atmosphere pervades not only the exterior scenes, but the interiors filmed within the walls of the studio-built Cornish castle, as well. The visual treatment is all of a piece, and it rings true in every frame.

The authentic 17th Century Cornwall estate, designed by art directors Lyle Wheeler and John & Cain, occupied nearly all of Stage 14 on the Fox lot. It was unique for Hollywood in that it was completely functional and continuous instead



PARTICULARLY notable in the lighting of scenes in which deHavilland and Burton are shown in odd scenes of illumination. Lyle Wheeler and art-directors play small spotlights on props and walls as they moved through the scene.

of being rootless and disjointed as most sets are. The camera could pick up people arriving by horse-drawn carriage at the front door, take them inside, downstairs and out to the rear gardens in one continuous action. Made of stone with a slate roof, it contained leaded windows, rare Flemish tapestries, knights' shields and weapons, huge stone fireplaces, candle-labers and authentic antique furniture of the period. In addition, it featured interesting nooks and crannies, surfaces and textures that are a cameraman's delight.

Establishing long shots of the exterior locales were actually filmed in Cornwall by a second-unit crew. Fortunately, leading man Burton was in England at the time and available to be photographed in these scenes. The clever idea, then, however, was filmed in the studio quite some time later, mostly in front of the process screen. La Shelle had noted



**SCENE IN OPENING** sequence of picture in which LaBelle demonstrates the fine technique of matching the lighting of outdoor "natural" scene with that of background plates (set and stuff) used in backdrops the scene



**FEW PICTURES** display the meticulous care given to lighting of individual scenes. LaBelle's lighting definitely enhances the entire performance of Miss Olivia DeHavenland, star of the production



**HERE** careful lighting picks up the architectural highlights of the scene without detracting from the picture, at the same time maintaining the "old world" mood of the story as Miss DeHavenland poses for her guests



**AGAIN**, in the closing sequence, background plates are skilfully used to provide background for the actor without being seen, showing Miss DeHavenland dying on table following her fall from a rocky bridge

that in all of the establishing shots sent back from Cornwall, a strong wind was in evidence—so he carefully duplicated this effect in his process scenes through the use of wind machines. The result is a perfect match between the real thing and the studio product.

In the film there are several sequences in which characters are seen walking down the somber corridors of the castle carrying lighted candles. It had to be apparent in these scenes that the candle was the only source of illumination, an effect which is usually not very convincing on the screen. La Shell armed three assistants with small portable spotlights, and trained them to move precisely with the actor as he walked. One man cast light on the actor, while the other two trained their spotlights on the walls next to and behind him—producing a glow as uniform as that given off by an actual

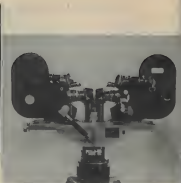
candle. It took a bit of practice before the assistants could synchronize their movements exactly to those of the actor (especially when he was ascending a winding stairway), and it was also not easy for them to stay out of camera range while doing so—but the final result is perfect.

In another sequence, the director of photography used his technical ingenuity to put across an important dramatic subtlety that actually might have proved cumbersome had it been portrayed with less skill and good taste. It seems that in this film the first kiss of the two main characters is no mere callous osculation calculated to leave the audience limp with vicious ecstasy. Rather, it represents the important turning point in their non-woman relationship, a dramatic milestone which completely alters their previously

(Continued on Page 86)



KARL STRUSS, ASC, (left) and camera crew film a scene for Sol Lesser's latest 3-D color film at RKO-Pathe studios, using Stereo-Cine Corp.'s camera equipment. Struss, pioneer cinematographer, is an expert on three-dimensional photography.



STEREO-CINE CORP.'s latest 3-D camera equipment is built around two Eclair 35mm Camerettes, which pivot up or down from dual reflecting mirrors (center). Adjustment obtained by equipment is the variable interocular in addition to micrometer positive adjustment of mirror. Company also is building additional 3-D units, one employing Mitchell BNC camera, similarly mounted.

## Stereo-Cine Corporation Is Newest 3-D Filming Organization

Sol Lesser first to use company's new 3-D camera  
equipment which utilizes Eclair 35mm Camerettes.

Karl Struss, ASC, directs the photography.

By ARTHUR ROWAN

UTILIZING THE 3-DIMENSION camera equipment of the Stereo-Cine Corporation, producer Sol Lesser, on January 9th, began production of his first stereo theatrical film in color at RKO-Pathe studios, with Karl Struss, ASC, directing the photography. The event marked the second independent 3-D film production company to get under way in Hollywood during the past twelve months; the first was Arch Oboler, who last summer filmed "Evil's Devil," utilizing another company's 3-D camera equipment.

Stereo-Cine Corporation, the newest Hollywood company to make available

3-D camera equipment to film producers, is headed by Raphael G. Wolf, whose business film studio under the same name is one of the best known in the industry, and Sol Lesser who joined with Wolf in forming the company following Wolf's extensive development of camera equipment and 3-D filming techniques. The company is a service organization set up to provide the camera equipment, technicians and consultation to film producers interested in making motion pictures in 3-dimension. The company itself produces no pictures. However, Lesser independently will, and has several productions in the

planning stage to follow his present 3-D effort.

Stereo-Cine's 3-D camera equipment resembles in arrangement the dual camera used by Milton Gaudberg's Natural Vision Corporation, and those of the English company which produced the stereo film which were exhibited at the Festival of Britain.

Stereo-Cine Corporation's first 3-D camera equipment, forerunners of economy and a desire to cut down weight, is built around two French-made Eclair 35mm Camerettes. These cameras are mounted on a specially designed base, as illustrated above, upon which they can be moved back and forth (toward and away) from the dual reflecting mirrors in order to vary the interocular. As with other 3-D apparatus of this type, the mirrors are precision mounted on specially designed bases, and their angle may be varied by means of micrometer adjustment.

The important refinement claimed for the Stereo-Cine Corporation's camera equipment, and which reportedly is not found in other similar equipment, is the variable interocular, which it is frequently necessary to employ in order that the photographed result will have no adverse effect on eyes of the audience.

Many variations of this equipment  
(Continued on Page 78)

# AQ.

Why is the **CAMERETTE** being universally selected as the ideal professional camera for **3-DIMENSIONAL** photography?

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Stephen G. Wolf, president of Stereo One, Inc., with stereo technicians Harry Johnson and Rex Beddard and two Camerettes in Stereo One mount for three dimensional photography.



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INTELLIGENT camera movement is the result of close, careful pre-planning between the cameraman and the director. Here cinematographer Harry Jackson's camera crew tracks a moving crowd shot in London in Argentina for 20th Century-Fox's "Way of A Gypsy."



THE MOBILE camera is used prominently in the production of "actions," especially in London, where "other" cameras—despite high point of most action scenes. The camera can be extremely rugged, and often must follow different camera to provide single angle shots of the action.

A SOUND PSYCHOLOGY underlies the use of the mobile camera. Movement purely for the sake of movement is an abuse of an otherwise forceful technique. The intelligent director or cinematographer moves the camera only when the demands of the filmic situation dictate that movement. Correctly used, the mobile camera produces a fluid continuity—a smoothly-flowing interplay of changing compositions within the individual scene. These compositions change and vary from extreme long shots to extreme closeups without the harshness of a direct cut. Thus the audience's attention is held without mechanical interruption to the subject-matter of the scene.

There are several types of camera movement, and each device has come to be known by a specific name. The *follow shot* is one of the most common techniques and, as the name implies, it is used to follow the action of one or more characters within the scene. Usually this is accomplished by a simple tilt or pan or a combination of the two. Frequently, however, it becomes necessary for the camera to follow a player over a wide stretch of terrain. When this is the case, the camera is mounted on a dolly or camera boom and we have what is known as a *tracking shot* in which the camera actually follows right along with the subject in his course of action.

In this type of shot the camera's motion for movement is usually pretty

well established, since it depends upon and is keyed to the movement of one of the players. The effect to be desired, as in all types of camera movement, is smoothness—since a jerky pattern of movement would distract notice from the scene than it would add. If the camera glides smoothly along, the audience will not be consciously aware of the movement in itself.

Another type of moving camera shot is the *pull-back*, in which the scene opens with a close-up, the camera later pulling back to present a much wider angle of the scene. This device is used where it is first necessary to focus the audience's attention on a certain small detail of the scene, later broadening the angle to show the context in which that

detail is mounted.

In the film, "The Lost Weekend," photographed with superb realism by John Seitz, ASC, there was one memorable scene of this type that opened with a striking super closeup of the main character's eye as it fluttered open, bloodshot and heavy, the eye of a drunkard. The camera then pulled back to a medium long shot of the character as he awakened from his snapper and began to stumble about the room. In this shot, the closeup of the eye was the keynote of the scene. It set the psychological mood; it focused the audience's attention by filling the screen with a small but vital detail of the character's state of being. The critical expression

(Continued on Page 75)

## 'Fluid' Camera Gives Dramatic Emphasis To Cinematography

Correctly used, the mobile camera produces fluid continuity—a smooth-flowing interplay of changing compositions within the individual scene.

By HERB A. LIGHTMAN



WHEN FILMING the very small gas flame used in a refrigeration unit, a mixture of salt water was used to minimize glare, rather than the flame. Another the flame with a fine jet of air from a small compressor gave sufficient picture interest to the scene.

ACTORS and scenes were used here made up of which to mount scenes for a daily shot of inventor's history were. Accidents on other side of stream pulled out through water by means of ropes.



## Filming A Documentary Of The Gas Industry

Getting a clear image of a gas flame on film was just one of many problems encountered in filming history of illuminating gas industry.

By JOHN R. F. STEWART, A.R.P.S., M.B.K.S.

COMMISSIONED by the Gas Council of Great Britain to make a 25-minute documentary about the history and present-day uses of coal gas, I soon discarded the old advice on story telling—"Start at the beginning, go on to the end, and then stop!"

There were a score of beginnings, the story covered hundreds of years, and there is certainly no end in sight yet.

But eventually, from the vast amount of material available, it was decided for the historical sequences to concentrate mainly on the story of William Murdoch, 18th century Scots inventor, and one of the first men to light a house with gas.

But in a film which combines histori-

cal episodes, played by actors, with documentary sequences filmed in factories and laboratories, it is important that the historical incidents should have the utmost realism.

Extensive research was undertaken to insure that props, clothes, sets, etc., were correct for each period. Museums were searched for equipment, gas apparatus and tools which might actually have been used by Murdoch or his contemporaries. Some scenes in the film, showing Murdoch experimenting with a model steam locomotive, were shot in the actual last—at Redruth, Cornwall—where the incident really took place, one hundred and sixty eight years ago.

The original engine exists today, and

for the film an exact replica was made with one difference: a concealed electric motor, worked from a miniature bearing-and battery provided the power; the "steam" was produced by smoke pellets in the funnel.

To help convince audiences still further that the scenes from the past are not fiction, but the reconstruction of historical fact, the film starts in the present day, at the cottage in Scotland where William Murdoch was born.

Yes, the cottage still stands today but altered and modernized and with an electric, not a gas, range in the kitchen.

We filmed a plaque on the wall, commemorating Murdoch's birthplace, and a nearby cave, hewn out of rock, where Murdoch played as a boy. In those days the cave was easily approached from the bank, but through the years the path has crumbled away; so to get the shots, a raft was built for the camera and floated from the water on to the walls of the cave, helped to improve the pictorial value of the scene.

These scenes—of things which actually exist today—help greatly to assure an audience that the 18th century scenes in our film are also true, but a smooth and convincing transition to the past is essential.

After the cottage and cave is pictured, (Continued on Page 81)





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LOW-KEY lighting, characterized by softly lit highlights, and shadows which fall off into dense black, is especially effective when used in sequences dealing with crime.

## Set Lighting For Special Pictorial Effects

An analysis of mood and effect lighting for the student of cinematography.

By CHARLES LORING

**M**OOD LIGHTING, which functions to create a psychological setting for the audience's imagination, must only be used in sequences where the dramatic structure calls for such treatment. To force it into a sequence which does not warrant as forceful a technique is to create a much-ado-about-nothing impression in the minds of the audience.

As in any other kind of set illumination, mood lighting must remain consistent with source. It is true that the source may be relatively small, such as a candle, oil lamp or an open fireplace—but the cinematographer must first ask himself, "From where is the light coming?" Once having established this basis, he can slant his lighting pattern toward it

Many non-professional cinematographers become baffled when attempting this sort of lighting, because they walk onto the set and start arranging lights in accordance with a purely mental idea they may have of the desired effect. It is much more efficient to set up the actual situation, if possible, noticing the way the light falls, and then duplicating as closely as possible the highlight and shadow relationship in terms of artificial illumination. In order to reproduce the effect of candlelight, for instance, light a candle on the set and study the effect it creates.

As in any other phase of film production, special effect lighting should not call attention to itself. The moment the

audience begins to pay attention to the lighting instead of the dramatic content of the scene, something will be lost from the effect of the film.

Low-key lighting, characterized by softly lit highlights, and shadows which fall off into dense black, is especially effective when used in sequences dealing with crime, mystery and (paradoxically enough) love. Any dramatic situation in which human emotions are portrayed as "boiling about inside" can usually be helped by low key.

To be truly effective, a low key set-up should be arranged in such a way as to point up the main areas of action and play everything else down. This, of course, calls for pre-planning—therefore, the final lighting scheme should not be definitely set until the pattern of action in that sequence has been worked out.

Genuine low-key is usually lit rather softly, harsh black and white contrast being avoided. On the other hand, it does not do to use heavy fill light, as the low key effect will then turn into a waxy-waxy overall gray pattern.

In lighting low key, the highlight areas are given normal light levels, while the shadow areas are allowed to fall off sharply. These are two schools of thought regarding the exposure of this kind of set-up. Some cinematographers advocate slight underexposure and normal printing. Others advocate normal exposure, with the negative later being printed down for a darker effect. The latter theory seems to give the most favorable result, since in this way a greater amount of shadow detail is included on the film—but, in either case, one must be sure to let the laboratory technicians know the exact effect desired, or they may over-compensate in printing.

Another style of lighting, having a predominance of shadow area, but with a more dynamic quality than straight low-key, is that which is known as out-of-balance lighting. This type is characterized by harsh contrast between crystal white and velvet black, with very few intermediate gray tones.

Although somewhat radical in effect, out-of-balance lighting is extremely dynamic and is especially adaptable to violent action or dramatic themes. Its stark light and shade patterns are not always flattering to feminine players, but the realistic effect it produces is very suitable for down-to-earth dramatic or documentary subjects.

The effect is achieved through the use of simple, brilliant light sources with little or no fill illumination. In its more extreme form, area are used to good advantage. The style differs from straight low-key in that it is much harsher in contrast and utilizes more brilliant key light. For this reason, the "glamour" shots which are so effective in softly

(Continued on Page 77)

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FIG. 1—Illustration of woman in camera viewfinder system, at point 15 in Fig. 2 at right. The photo cell in picture (Fig. 2) is moved over area to make readings of 1, 2, 3, 4, and 5.



FIG. 2—Profile of the sensitometry system, showing photo cell at one end (15). When 17 and 18 lead to galvanometer dial, from which exposures are computed.



FIG. 3—Cross section of Edlar Gammameter, showing photo cell in front of ground glass indicated at 15, to read exposures at various points of scene.

## A Built-in Exposure Calculator For Motion Picture Cameras

Novel sensitometry system reads light values selectively over sections of image area as seen in finder ground-glass.

**A** FRENCH ENGINEER AND INVENTOR, A. C. Coustau, has developed a new system of determining correct exposure for cinematography by means of a sensitometry system built into the camera itself. The invention was illustrated and described in an article appearing in the July, 1952, issue of *Le Technique Cinématographique*, published in France.

Until recently, such a method of exposure calculation has been attempted only with certain cine cameras manufactured in Europe. Coustau's invention has initially been adapted to the Edlar Gammatte (also known as the Came-Bax), a camera ideally suited to the method by reason of its through-the-lens reflex viewfinder system.

In describing his invention, Coustau states: "It is customary for the director of photography to use a photo-cell exposure meter to measure the light of the scene to be photographed. The information given by such an instrument is only approximate, because the intervals of light reflected by a scene or subject vary from one point to another in the picture area, often in rather large proportions, so that the measurement obtained by the meter is but an average of several direct readings.

"When dealing with cinematography on the sound stage, the cameraman is

obliged to take several meter readings of the light coming from the various set lighting sources and determine the working average.

"Still another factor that deserves consideration is the way certain objects or subjects have variable reflecting qualities depending on the colors, the brightness, diffusive quality, etc. Light may also vary with the weather and with the positions of either the subject or the camera.

"Previously, efforts have been made to obtain exposure meter readings by placing a photoelectric cell immediately behind a translucent glass situated at the focal plane of the lens, but measurements thus obtained represented only the average of the overall light transmission as reflected from the scene. Moreover, such measurements could not discriminate between the dazzling high-light areas of the subject with their tendency to overexpose the film, and the shadow areas incapable of making an impression on the emulsion.

"The invention described here has as its object a means of measuring exactly the luminosity of all the points of the scene to be photographed, by exposing selectively, with a sensitometric probe, the whole image at a point within the optical system, as illustrated in the ac-

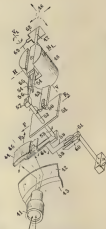


FIG. 4—Exploded view of Coustau's sensitometry system for motion picture camera, which is fully exposed in the accompanying article.

companying diagrams. This probing can be done with the aid of very small photo-cells; and the smaller the size of the cell, the smaller the sections of the picture area that can be measured.

"In short, what this method does is to permit the cameraman to obtain selective sectional readings of the overall

(Continued on Page 66)

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Robert Surtees, M.G.M.'s Director of Photography for "Ride, Vaquero!"

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# What The Cine Photographer Should Know About Hyperfocal Distance\*

By JOSEPH WALKER, A.S.C.

**C**ORRECT FOCUS is an absolute essential to good photography. In some types of amateur and documentary filming, minor errors in exposure, composition and lighting may at times be considered forgivable. But unless a scene is in good focus, it's of no use to either the professional or the amateur.

The professional cinematographer, of course, has a double check on his focus. First, he is able to study the actual image, right-side-up and highly magnified on a ground glass focusing screen. In addition, it is standard practice to measure the distance from the camera to subject with a tape measure before every shot, and set the lens accordingly.

But the amateur cinematographer doesn't enjoy these advantages. Only a few 16mm or 8mm cameras permit any sort of ground glass focusing, and only a very few of these give the ground glass image magnification great enough and central enough to permit absolutely precise focusing. Only a very few of the most careful-minded amateurs take the trouble to work, professional-wise, running a tape before each scene. And while an unassisted magnifier would be invaluable in substandard camerawork, thus far only one amateur camera so equipped has appeared on the market. So focus remains headache No. 1 for the 8mm and 16mm moviemaker.

To some extent, the extreme focal depth of the short-focus lenses generally used on 16mm and 8mm cameras can cover up minor errors in focusing. But not always—as most users of focusing mount substandard cameras can testify from sad experience! And even in 8mm, a scene where you'd guessed wrong in adjusting the lens of a focusing-mount camera is usually a good deal worse than what you'd have gotten under the same circumstances with a simpler, fixed-focus lens.

The answer is that the manufacturer of the cheaper, non-focusing lens has taken advantage of a very useful little optical fact and mounted the lens so that it is permanently focused at what is

called its hyperfocal setting. You can make this same optical fact work even better if you have lenses in focusing mounts. Especially when you're working under pressure, making scenes of the "grab-it-quick" type, where you want to minimize fiddling with and thinking about basic camera mechanics, you can often set a lens at its hyperfocal setting and then forget focus, confident that (at least on most normal shots) everything important in your picture will be in adequately sharp focus. But to do this you're got to know what the hyperfocal distance is, and how to put it to work.

As a matter of fact, the hyperfocal distance is a double-edged affair. First of all, it is the distance at and beyond which all objects are in focus when sharp focus is secured at infinity. But also—and perhaps more important—if you focus the lens at the hyperfocal distance, everything from one-half that distance from the camera to infinity will be sharply defined. If, for instance, the hyperfocal distance were 25 feet, everything from that point on to infinity would be adequately sharp with the lens

at infinity focus, while if the lens were placed at the hyperfocal setting of 25 feet, everything from 12½ feet to infinity would be adequately sharp.

The hyperfocal point is dependent upon three factors: the focal length of the lens, the aperture used (expressed as an f-stop) and the circle of confusion.

The term "circle of confusion" refers to the diameter of the lens' image of any given point in the subject. Theoretically, if lenses could be made perfect, the image of a point would also be a point. But in practice, not even the finest of lenses can bring the images of all wave-lengths or colors of light to a focus so precisely in the same plane that the image of a point will be a true point. Instead, some wave-lengths will come to a focus on the plane of the film, while others will be focused microscopically behind or in front of it, in either case giving an image on the film slightly larger than the actual point. The practical result is that the image of the point is reproduced as a circle, rather than as a point. Maybe it is microscopically small, but it is still mathematically measurable as a circle instead of a point.

The size of this circle of confusion therefore becomes one of the chief governing factors in the matter of image definition. Speaking generally, the finer a lens, the smaller the diameter of its circle of confusion. In the same way, if a lens is to be used for work that is not too exacting, you can base your hyperfocal and depth of field calculations on a circle of confusion considerably larger than is necessary in a lens to be

(Continued on Page 42)

**HYPERFOCAL DISTANCES**

Stop	FOCAL LENGTH OF LENS					
	12½mm.	15mm.	25mm.	1½-inch.	2-inch.	3-inch.
	HYPERFOCAL DISTANCE IN FEET					
f/ 1.8	11¼	16	46¼	104	185	417
2.5	8	11¼	33½	75	133	300
3.5	5¾	8	23¾	53½	95½	214
4.	5	7	20¾	46¾	83	187
4.5	4½	6½	18¾	41¾	74	167
5.6	3½	5	14¾	33½	60	134
6.3	3¼	4½	13½	29¾	53	119
8	2½	3½	10¾	23¾	42	94
11	1¾	2½	7½	17	30	68
16	15¼"	1¾	5¼	11¼	21	47

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**W**RITING a script for an 8-mm or 16-mm motion picture is a matter of planning, in more or less detail, what is to be filmed and how. The "what" is determined by the subject of the picture but the "how" is, within certain limits, the responsibility of the cameraman. And this quite apart from whether the photography is adequate or even good from a purely elementary, functional viewpoint.

A motion picture is a story told through a pictorial medium. The pictures, or scenes, that are parts of the film as a whole should each have the eye-arresting appeal that marks the work of the graphic artist, plus the in-

terpretive quality necessary to sustain interest at a maximum and unfold the story expertly. And that's where the script comes in. By planning even the most seemingly unimportant inserts, due consideration should be given to the emphasis they will put in the sequence as a whole—emphasis pictorially or dramatically.

To take a clinical case let us suppose that a story calls for a scene which shows a man climbing a flight of stairs. We want to get over the fact that the man is being most cautious not to be heard. We also want to get over the fact that the stairs creak.

When the script is written it is de-

vised that the scene is necessary because (a) it provides proper continuity between the previous and succeeding action, and (b) it is necessary to "plant," or emphasize, the squeaking stair for proper motivation in the next sequence. It is also realized, however, that the scene is of secondary importance to the story and that the opportunity for action or "business" is limited to the extent that the interest might lag if the scene is not handled with due consideration for picture value in the filming, and timing in the editing.

The problem can be resolved by filming the action thus: 1. Medium-shot. Max enters scene, takes off shoes and starts up stairs. 2. Close-up, through banisters in foreground, of stockinged feet cautiously treading stairs. Foot is placed on stair as though trying it, and then withdrawn, then replaced again. 3. Close-up of man's face registering apprehension. 4. Medium long-shot looking down stairs. Man comes up to and past camera.

Thus, what might have been a dull or uninteresting sequence becomes an opportunity for some appealing angle shots which help "sell" the picture; emphasis is placed where it is needed and when the film is edited it will be possible to cut this sequence so that there will be a sufficient variety of shots to eliminate the possibility of "interest drag."

Another great advantage that the cinematographer will discover when he undertakes to shoot is the greater opportunity he will have for using his versatility as a cameraman. As a consequence his pictures as a whole will possess more photographic variety and charm as well as added lucidity and punch in telling their stories. By doing so more, for instance, than to plan the use of varying angles at which to shoot certain scenes will, quite often, lift a reel out of the ordinary.

It is sometimes surprising how easy it is to be monotonous photographically. Scenes that from an action viewpoint have every reason to be stimulating frequently suffer because they have a photographic sameness as tedious previous scenes. And in judging the interesting-ness or qualities of a given bit of action, the experience or opinion of a mere spectator is worthless. Things just don't read the same from the screen.

An interesting example is illustrated by two films made of the same event recently by two different cinefilmes of the right and wrong way to make an amateur film. Unknown to each other two camera enthusiasts had turned out to film a rodeo. Both men got almost exactly the same material. Both reels were photographically excellent as far as exposures and camera handling were



concluded but there the similarity ended.

One man turned in something that was tedious to sit through and failed in every way to convey the excitement and drama of the rodeo or do justice to the subject-matter. He made the mistake of shooting everything from a monotonous eye level with the result that all the vitality of his subject was strangled out. When he edited the film he hadn't a chance. And even the technically excellent follow-shots he made with his telephoto lens hardly helped to dispel the sense of sameness that pervaded some after some.

The other man opened with the same parade and filmed the same events. But with what amazingly different results! First, he filmed general rodeo atmosphere stuff. Then, instead of filming entry after entry in the same events, he took time out to think up a few ideas and made some notes. In effect he wrote a script. Simple and unassuming, but sufficient for the purpose.

Reviewing the list of scenes he had already made, and cutting the film in his head's eye, he made a list of shots he would take. And they were the scenes that made the picture, that lifted it out of the class of stuff that the average commercial makes, and turned what might have been just another photographic record of a sporting event into a short-subject that would have been a welcome addition to any theatrical program.

He made human interest shots of small boys standing in open-mouthed admiration; he made another memorable shot of a rather sedate woman trying to catch in her mouth the dripping mustard from a hot-dog; and reaction shots of spectators in a whole block of seats rising to their feet, tense with excitement.

Lucky? Yes . . . in a way: he wasn't looking for just these shots but he was looking for characteristic atmosphere and crowd shots, was on the alert for them—and he got them. These three were clutched up a bronze's head tapping against the restraining hands behind the gate; of pawing hoofs, of steers and larvae. The cowboys sitting on the corral fence were recorded, too, in both long-shot and closeup. So were the silver-mounted saddles for which the cowboys were competing.

These shots were photographed with every consideration for pictorial value and photographic variety. There were shots framed by hands and stirrups and corral railings. There were horse-eye shots and worm's-eye shots. The cameraman must have made an awful nuisance of himself—but he apparently took advantage of the tolerance most people

(Continued on Page 38)

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**T**WO SIGNIFICANT TREND in motion picture production—expanding use of color film, and the increasing use of 16mm film for TV shows—are responsible for the recent expansion of facilities of the Consolidated Film Industries, Hollywood.



SIDNEY P. SOLOW

Ready for occupancy the latter part of this month will be Consolidated's new 16mm film laboratory, which has been especially designed for the processing and handling of the company's growing 16mm film business.

Erected on company property adjacent to its present quarters on north Seward Street in Hollywood, the modern 3-story concrete and steel edifice becomes the largest 16mm film laboratory in the world, both in size and in film handling capacity.

The increasing demands made on Consolidated by major film producers for processing 35mm color film has made it necessary for the company to take over more and more floor space formerly devoted to 16mm film processing, according to Sidney P. Solow, general manager of the company's Hollywood laboratories. Ideally, this need for added facilities reached its peak just as the television industry began making increased demands on the company for 16mm film developing and printing. Plans for the new 16mm laboratory

were subsequently rushed into preparation, and construction of the plant began early last summer.

A preview of the new plant reveals the intelligent thought that went into the planning, which will make this the most efficient film handling plant anywhere. Says Solow, "We have distilled all the best ideas in laboratory construction and practice that have been developed over the years, have shaken out all the frills, to make this the most efficient plant of them all."

The plant, 55 by 156 feet in extent and having a total floor area of 25,000 feet, has two stories and a basement. The whole structure was designed on the principle of straight-line flow of film from its acceptance to delivery after processing—with all major operations conducted on the first floor. Here are two modern fire-proof film vaults for raw stock, having scientific humidity and temperature control. Three separate printing rooms have the latest type indirect-type safelights, with different lights for each particular kind of film stock used. The film developing room on the same floor has two of the latest type 32mm (double-width 16mm) automatic developing machines. All tanks and moving parts are made of stainless steel. All plumbing used in the transmission of developing solutions is stainless steel tubing. A feature is the stainless steel quick-detachable couplings for the tubing, which permit taking out complete sections of the plumbing for cleaning and inspection.

The film is washed in the final stage

of development by the spray method—the only method that insures absolutely clean and unstained film, according to Solow. Just before the processed film leaves the drying cabinets, it is subjected to a protective coating. Consolidated is probably the only 16mm film laboratory which includes the protective coating as part of its laboratory service.

With 16mm reposit color film only a matter of time, Consolidated engineers have provided for the demands that use of this film will make on the company's facilities. The company will be able to make any changes necessary as use of this film begins, and to gradually expand its facilities in keeping with the increasing use of the film without hampering the laboratory's other operations in any way.

Continuing along on this same floor, we find the modern, fully-equipped projections rooms in which all film processed by the company will be checked visually through top-screen projection before being delivered to the customer. Two 32mm projectors will be running constantly in making such checks. Afterward the film will proceed via conveyor to the hand inspectors, cutters, packers, and finally to the shipping department. The plant will have a capacity of half a million feet of 16mm film per day.

The second floor is devoted to customers' service. Here are a spacious lounge, two 16mm projection rooms—each with several types of screens, 20 cutting rooms, each with individual temperature control, and the negative cutting room for Republic Pictures Corp.—the parent company, incidentally.

In the basement are located the company's steam plant, air conditioning and humidifying equipment, film developing tanks, and the solutions control system.

Solow Solow, who has been associated with Consolidated for over 20 years, says the new plant will enable care for the great expansion in 16mm film production now under way on the West coast. The company serves mainly four major groups of 16mm film producers: Business and Commercial, Educational, Religious, and Television. Solow, incidentally has been an important contributor in the science of correct developing and printing procedure for films for television. Before satisfactory transmission of 16mm motion pictures on television was possible, it was necessary for the industry to determine the density ratios most compatible with existing electronic equipment. As a result of its extensive research and the technical assistance which the company has rendered to both film producers and TV transmission engineers, Consolidated has become a leading processor of television films on the West coast. **END**

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(Continued from Page 74)

have for kids and cancer addicts.

When this man edited his film he had plenty of material to work with. The brief panser sequence that opened the epic was intercut with reaction shots of kids and crowds. When action sequences weren't filmed sufficiently well in their entirety or when the action was too short or too long, he had interesting,

atmospheric cuts to fall back upon. Nothing new, or original? Certainly not! Only a splendid example of following tried and true professional methods and formulas to make a picture more entertaining. And movies—whether professional or amateur—will always "pay off" on the amount of entertainment they offer audiences! **END**

## 'FLUID' CAMERA

(Continued from Page 61)

created by that closeup carried over to the remainder of the scene and influenced the audience's reception of what followed.

A corollary to this type of shot is a device in which the camera first shows a long shot of the scene and then pushes in to a close shot of a certain segment of the action. This is a widely used type of camera movement and has the effect of first orienting the audience as to locale, action, and period, before moving in to treat dramatically a smaller part of the overall scene.

A variation of this technique is the zoom shot, in which for dramatic effect the camera first shows a relatively wide angle of the scene, then rapidly pushes or zooms in to a close-up of a specific detail of the scene. The zoom shot, when correctly used, is a dynamic way to focus audience attention on a dramatically important facet of the scene.

Except in a dramatic, it is not considered effective technique to pan a static object—although many film-makers have done so in an effort to force action into an otherwise dead scene. At best this is a forced technique and should be avoided except where inserted for special effect. More movement of the camera can never compensate for a lack of action within the scene.

Occasionally in a photograph, the camera—in its role of observing eye—becomes a wandering reporter, browsing here and there to pick up bits of action and characterization, then moving on to select other facets of the situation, the sum total of which adds up to the creation of considerable atmosphere. A notable example of this technique was used in the memorable film, "Casablanca," photographed by Arthur Edson, ASC. In the sequence establishing the interior of "Rick's Cafe Americain" (main locale of the story), the camera picked its way through the crowds, stopping at various tables just long enough to pick up scraps of color and atmosphere, then

moving on. It moved exactly as a casual observer might move if he were threading his way through the maze of tables, catching a glimpse of this person or that and overhearing an occasional shed of conversation. The effect in the film was to set the unusual mood of this exotic locale, to identify the types and characters involved in the story, and to prepare the audience for the action that was to follow.

In studio parlance, whenever the camera moves and comes to rest on a new composition, the maneuver is known as a camera stop. Certain scenes, especially in musical extravaganzas, involve a great many camera stops. In fact, when this type of film was first becoming popular certain directors and cameramen (as a matter of professional achievement) used to vie with one another to see how many camera stops they could get into one continuous scene. Actually, if well done, this type of scene is more effective than a series of cuts in portraying a musical number, but when camera movement becomes an end in itself, the result is bound to be clumsy and without meaning.

One otherwise competent director of musicals and light comedies used to insist that the camera be moving in every scene. He would hear the camera pushing in, pulling back, zooming down from the sky or up from the ground, whether the scene required camera movement or not. In one film this particular director shot—a film containing well over 300 scenes—there was only one scene that was absolutely a static shot. Audiences left the theatre after viewing this film complaining of headaches from being "whirled around so much."

At the other extreme was an equally competent director of dramatic themes who insisted that the camera should never be moved. His compositions on the screen were particularly forceful and artistic, but he was reluctant to move

the camera for fear his careful composition would be destroyed. As a result, his action within the frame was stifled, inhibited, held back. You could almost sense his players watching for the chalk marks on the set floor so that they would not step outside the bounds of the static frame. In one drama that this director shot—a film crammed full of artistic and static compositions—there was only one short follow shot. The result on the screen was a static drama.

Obviously, intelligent camera movement is the result of close, careful pre-planning between the director and cameraman. The director, in his interpretation of the author's screenplay, plans his action and consults with the cinematographer as to how that action can most effectively be portrayed on the screen. Often it is found that a series of consecutive compositions can be embodied in one scene and connected by well-motivated camera movement. The resulting scene (which otherwise would have been staged as a series of short choppy scenes) becomes a fluid continuity of changing compositions that move smoothly, one into the other.

The fluid camera is a device that belongs peculiarly to the photoplay. It has the quality of action that is essential if motion pictures are to be truly "moving" pictures. Skillfully used, camera movement gives the motion picture unlimited scope to select and present on the screen the various elements of the story in dramatic and forceful relationship to one another.

## SET LIGHTING FOR SPECIAL EFFECTS

(Continued from Page 46)

diffused low-key are almost impossible to achieve in out-of-balance illumination, but the style is most valuable for the illusion of unvarnished reality which it produces.

Many film-makers fail to take advantage of the fact that lighting consists not only of highlights, but of shadow as well—and that, skillfully used, shadows can be used with striking effect to point up a scene story.

Basically, shadows give depth and modeling to a subject. Where a set is over-lit in such a way that most of the shadows are cancelled out, the result is usually flat and uninteresting. But shadows carefully controlled and with suitable fill give soundness and perspective to sets and players.

Shadows can be used to create attractive and dramatic backgrounds. Card-board cut-outs placed in front of a spot light are the simple materials necessary to project such patterns as prison bars, church windows, venetian blinds, etc. In

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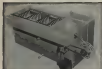
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this way, the suggestion of a full set can be projected upon a bare wall or flat, an interesting pictorial background can be achieved, and clearances need not be intruded.

Often shadows are used to suggest an active force threatening a character in the story. A player spotlighted in one corner of the screen with a dark mass of shadow engulfing everything else, will convey the impression that the character is being threatened by unknown hostile elements. In a chase sequence, high shadows that dart about with the fleeing character will intensify the further nature of the chase.

Sometimes moving shadows can be highly effective, as in a scene where the shadows of trains, cars, or people intermittently cross the players. A light going on and off outside the window of an otherwise dark room creates a highly kinetic effect.

Plane lighting as a style of set illumination in which shadows play a dominant role. This is the kind of pattern in which specific areas and planes of the set are illuminated, the rest being allowed to go dark. The players, moving from one area to another, alternate by passing through highlights and shadow in a way which is dramatically striking.

Silhouette too, is an effective way to use light and shade. It is especially good on close-ups in which the characters are shown in profile. It is useful in emphasizing dialogue where the visual image would otherwise interfere. It also is a good way in which to play down one character in contrast to another who is brightly lighted.

There are several special effects which apply to situations that are bound to come up in the course of the average lamp-light, foot-light, flashlight, etc. We shall analyze methods of stimulating these effects with a minimum of lighting units.

**Candlelight**—For medium shots where the light source is not shown, use a small, unshaded No. 2 photoflood placed in the center of the table and screened from the lens by one of the characters in the scene. This will produce an overall glow, stimulating the light source of the candle. For a long shot, where the candle is seen, use spotlights (one for each character) cross-played at "candle level" and combined with smooth or burn doors. There should also be a spot played downward from directly overhead. For close-ups, use a baby spot or "dinky baby" (with light diffused scrim), placed a bit below eye level.

**Lamp-light**—Almost the same set-up as for candlelight (only somewhat brighter) in stationary shots; but when the character moves about the set, a small high-intensity "pinpoint" bulb can be fastened

to the lamp itself on the side not facing the camera. Use an auxiliary spot, focused softly, to follow the movement about the set as well.

**Firelight**—Naturally, the fire itself should be the "hotspot" part of the scene in angles where it shows. Therefore it is well not to overlight the rest of the scene. For reverse angles, not showing the fire, place your key-light low in the fireplace, simulating the natural source. Use floods or spots with fairly wide diffusion. The flickering effect of firelight can be achieved quite naturally by waving a small leafy twig in front of the light.

**Flashlight**—This effect is simulated by means of a baby spot with a concentrated beam located outside camera range. The operator must be careful to synchronize the movements of the spot to fit those of the flashlight itself.

**Matchlight**—In scenes where the character is portrayed as lighting a cigarette the glow can be simulated either by (1) fading in a concentrated diffused baby spot on the subject's face, or (2) by covering in the subject's hand a toy "dash-board" type auto bulb which will give just enough of a glow to simulate the matchlight effect.

The above are the simplest special lighting effects to set up, and also the ones which the advanced amateur or semi-professional will encounter most frequently in his shooting. It is well to remember that a good special effect should go unnoticed as such. In any event, where the effect seems too difficult to achieve realistically, it should be discarded and the action changed to accommodate a simpler and more natural effect.

The above article is condensed from "The Cinema Workshop," by Charles Loring.

## STEREO-CINE 3-D

(Continued from Page 66)

have been experimented with, according to Raphael G. Wolf, who said that at least in theory anyone can build such a device, using any of several available makes of cameras.

"The ability to use this equipment properly," he said, "is based on a mathematical computing system which takes into account set depths, focal lengths of lenses, and other relevant data."

Stereo-Cine's camera equipment has the advantage of extreme compactness and light weight. The complete unit is smaller in size and weighs less than a blimped Mitchell BNC. At the same time, the Eclair Camerettes used are said to afford advantages not found in many other 35mm motion picture cam-

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eras. Most important perhaps is the reflex shutter system which permits viewing the scene through the reflex finder as the picture is being shot—enabling the operator to keep an accurate check on alignment.

Shooting 3-D pictures requires precise alignment of the cameras, because adjustments for parallel and interocular must be exact. Once the camera position, angle, etc., has been decided, focusing and alignment of the twin cameras is done by means of special loupes which fit over the film aperture in the gate of the camera with the film magazines removed. Additional alignment checks are made through use of the finders, and there is also a Mitchell type finder situated just below the reflecting mirrors, affording the camera operator a magnified, right-side-up view of the scene at all times.

In the spring of 1947, there was born at the Raphael G. Wolf Studios in Hollywood, the first experiments in 3-dimensional film. The original plan was to make the medium available to the company's commercial clients. Late in 1951, the company decided to organize a stereo department. It assigned two of its engineers to develop a stereo camera device for 35mm. The project was speeded later in 1952 when an import-

Used Equip. Bargains — in this month's Classified Ads on Page 90

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ent client agreed to sponsor a stereo film. Tests made with the company's equipment last summer in both black-and-white and color proved highly satisfactory. About that time, due to the advent of "Bwana Devil" and *Cosmos*, attention of the theatrical world became focused strongly on stereo films. Walt Studios suddenly found themselves on the proverbial ground floor, with one of the few technically acceptable 3-D cinema interest on part of Sol Lesser led to formation of Stereo-Cine Corporation, and the start of his initial 3-D production in color, using Eastman Color negative.

In explaining the differences in technique between 3-D and 2-D motion picture photography, Raphael G. Wolff said: "If desirable camera equipment is used in photographing stereo films it is possible to place objects in space in their proper relation to the viewer. This is the essence of space control. Within reasonable limits we can dictate the placement of the screen plane or window. When flat film composition and lighting are used, this has inherent complications.

"In flat pictures, whether movies or any other kind of photographs, paintings or drawings, we have become conditioned to cut-offs. We subconsciously adjust for this by rationalizing that the person or object is behind a frame. In stereo films the same naturally holds true—for things behind the window, but if we place an object or person ahead of the window—the image appears to have been chopped off square and being suspended by some sort of levitation. This is disturbing to our sense of logic, and the suspended object calls attention to itself. In short, it is bothersome.

"By this token, the stands not ready to accept stereo as a new medium, claim that nothing should be brought forward from the window. This is not a valid critique, and is more likely based on the inability to control images properly—indicating equipment of limited versatility.

"We can put no such restrictions on 3-D techniques for the simple reason that if the medium is to develop as it should, it will eventually lead to drama in depth—in which the window is subjugated for action that happens just ahead of the viewer and on back to infinity. This will mean new lighting and staging techniques where objects in the foreground are shaded off so that they no longer appear as severed swords of themselves, elimination of conventional hard screen edges, and an enlargement of the reflective area to a point where it blends off at the curvature of the angle of human vision. The panoramic screen in which the vastness of background detracts from intimate action can be

modified by vignetting down the broad expanse and focusing attention on such interiors by bringing them out into the audience.

"Although we may be a long way from this point as yet, it is entirely possible that 3-D presentations of the future will utilize specially designed sets for better control of people or objects in space. For closeups and the foreground of action that takes place just a few yards from your eyes, sets may be designed with to focus consuming interest on a stage that seems an extension of your own imagination.

"While awaiting, extreme cuts from close to distant images or vice versa, and the dissolve, are not as practical in 3-D as the moment—it is well to remember that these are devices of the flat film, and eventually may be so more master than the stage "middle" or the contest between the acts of the legitimate theater. Each new medium develops its own devices to achieve intimacies and dramatic effects.

"There is one aspect of the technique which defies able rules and measuring tape: this is the thinking and planning in depth which must precede production. It is not practical to take a script prepared for an ordinary flat film and about it in 3-D. Many moves, angles and effects common to conventional motion pictures are not possible, or even desirable in stereo films. Any stereo film which makes the best use of the new medium will have to be re-thought somewhat to make a flat film release.

"One of the simplest points of difference between the two mediums is that 3-D scenes must all run longer than the average movie scene. One will find that one's eyes will tend to hold on the

ABY



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normal 3-D scene, and scout the places of depth reference as the action occurs. Another thing: shoot extreme cuts do not work out, neither very short scenes cut together as flashes, or cuts from extreme closeups to extreme long shots. It takes the eyes an appreciable moment to accommodate for the change. It is best to lead from close, through medium to long shots. But here again, the feeling of actuality experienced by the audience more than makes up for the variance in technique, which we in the industry will all have to become accustomed to."

## FILMING A GAS INDUSTRY DOCUMENTARY

(Continued from Page 64)

the film continues with shots of a nearby lane. While the commentator tells how it might have been along this very lane that young William set out to gain fame and fortune, a distant figure in 18th century dress slowly appears. He pauses for a moment to look back and then walks slowly away in the distance. It is no surprise, after this shot, to find that we are back in 1777, and Murdoch is being interviewed for his first job in Birmingham.

From here, the film follows the progress of gas through the years, back again to the present day, when research was new and more efficient uses of gas is covered, and the final sequences depict the many ways in which gas is employed in industry.

To improve the actinic value of the gas flame, two methods were used. For small gas jets, such as in kitchen ranges, applying a spray of salt and water to the flame made the gas burn with the bright red sodium color, which photographs well. For large gas installations, such as in the reconstruction of the Lyceum Theatre demonstrations, kerosene was injected into the main gas supply line, and film, too, considerably increased the photographic value of the light.

But a special difficulty was met in trying to show how a gas-operated refrigeration works. Here the gas is only visible as a single small flame about half an inch high. Even when brightened with salt and water solution, this flame was scarcely visible. The answer to this problem lay in directing a small current of air on to the flame, with an airbrush spray. This gave the flame just enough movement for it to catch the eye and to show clearly exactly what it was.

As earlier some shots Murdoch experimenting by putting small red-hot pieces of coal in the bowl of his pipe and lighting the gas which is given off. However, well the experiment may have worked originally, a safer and brighter flame for filming was given by candle

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of chlorine which, when ionized, gives off a vapor, igniting readily and burning brightly.

The glow given by the elements of a domestic gas fire was filmed satisfactorily at  $f/2$  on Plus X, but it helped if the gas pressure was above normal so that as large an area of the fire as possible became red hot.

In filming the use of gas in industrial processes, it was necessary to cut down the air which is normally mixed with the gas, so that it burned with a yellow instead of with a blue flame. This was especially true when the manufacture of dentures was filmed. Here were rows of burner burners, each normally giving a blue flame, almost invisible to the camera. Each burner burner was adjusted to cut out the air so that the flames then caught the eye immediately the scene appeared on the screen. Of course, the burners cannot actually be used like that, but the adjustment back to blue before the work commences was that it lay close up, so that the flame can still be clearly seen.

Location and exterior shots for "The Vital Flare" were filmed with a Newman Sinclair Camera having Cooke Patheflex lenses, and some of the studio scenes were shot with a Debric Lighting by Mole Richardson 2 KW., 1 KW and 500 watt units. Film stock was Plus X.

The completed film, available on both 35mm and 16mm prints the extensive film library of the Gas Council and is available to approved borrowers on free loan.

## HYPERFOCAL DISTANCE

(Continued from Page 76)

used for exacting work like cinematography. For still-camera work, for example, and even in some calculations for 35mm cine work, a circle of confusion .002 inch in diameter may be quite acceptable; but for really professional 35mm cinematography, and for all 16mm and 8mm cinematography (in which the relative enlargement in projection is much greater than in 35mm practice) the permissible circle of confusion must be taken as .001 inch.

The accompanying table gives the hyperfocal distances for the most commonly used substandard cinema lenses over the general range of stops. But it is easy enough to figure out the hyperfocal point for any lens and stop for yourself. The formula is:

$$H = \frac{f^2}{\lambda \times C}$$

In other words, the hyperfocal distance (H) equals the focal length of the lens (F) multiplied by itself and divided

by the product of multiplying the  $\lambda$  stop (f) by the circle of confusion (C). You can see that for any one lens, two of these factors—focal length (F) and circle of confusion (C)—remain constant. The other two may vary, and therefore influence each other.

Now let's see how this works out in practice. Suppose we have a 2-inch lens and use it at  $f/2.5$ . Assuming the circle of confusion to be .001 inch and substituting these numerical values into our formula, we have "H" equal to  $2 \times 2$  divided by  $2.5 \times .001$ . This works down to 4 divided by .0025, and gives us 1600 inches or 133 feet. If the lens is focused at the 133-foot point, everything from a point about 65 feet from the lens to infinity will be sharp.

Now, let's stop the same lens down to  $f/11$ . This will give us  $2 \times 2$  divided by  $11 \times .001$ , which evolves to 4 divided by .011 and in turn works out to a hyperfocal distance of 363 inches or 30 feet. At this setting, everything from 15 feet to infinity will be adequately focused.

For contrast, let's consider a very short-focus lens, like the 125mm lenses used on 8mm cameras. Working it wide open at  $f/19$ , the formula would figure out as  $.5 \times .5$  divided by  $19 \times .001$ , which comes down to .25 divided by .019, and gives us 131 inches or 10.9 feet as the hyperfocal distance for this lens at this wide-open aperture. Using the same figuring for the same lens stopped down to  $f/11$ , we find the hyperfocal distance in this case has moved up to 135 feet from the camera. No wonder we get such remarkable results with fixed-focus sights!

But there are times when we may want to obtain adequate focus on some

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## A BUILT-IN EXPOSURE CALCULATOR

(Continued from Page 66)

scene, as reflected through the camera, through an exposure device which permits these vertical measurements to be made of the scene without taking a conventional exposure meter into the scene to measure each section of light and dark and intermediate areas.

Mr. Contant goes on to say: "The semimetric exploration can be made in the focal plane of the lens on the same size image as the exposure opening; the exploration of the surface of the ground glass between the lens and this (focal plane) surface thus corresponds to the same surface of film emulsion as checking the frame on ground glass, or the reflex vision on the ground glass as seen in the viewfinder during picture taking. This translucent glass can be placed at 90° in relation to the exposure opening in such a way as to reverse the image without parallax, as in the 35mm and 16-35mm Camecorder.

"It is likewise possible to explore the image of the subject in front of the ground glass, using a semimetric reader attached to the camera or independent of it. In the latter case, the semimetric reader can be used to measure the photogrameters to be printed, the illumination and brilliance of the background, etc., by moving the photo-cell probe in front of the section to be explored. The light measurements are read from a small galvanometer dial shown in Fig. 5 just below components 60 and 61.

At this point it might be well to examine all diagrams accompanying Mr. Contant's treatise and which have been reproduced here. Taking Fig. 5 last, as a means of orienting the reader as to the method of installation and use of the semimetric reader, here we see the unique reflex-mirror shutter system of the Camecorder which permits through-the-lens viewing of the scene as it is being photographed. In this camera, the tip of the probe (Fig. 2) with its small photo-cell would be installed in front of the ground glass convex plane of the camera, indicated in the illustration at 15.

Fig. 1 shows a typical image as seen on the camera's finder screen. The circles 1, 2, 5, etc., indicate the points read by the photo-cell probe, shown in detail in Fig. 2. The entire mechanism of the selective semimetric reading device is shown in the exploded diagram, Fig. 1.

"When the camera is set up for shooting a scene, the image of the scene appears on the finder glass of the camera, as shown in Fig. 1. Examining this

scene, we find that it is composed of various areas of light and shade in varying degrees. The photo-cell obviously would record the window area (1) as strong in light, while that part of the scene under the table (5) would be weak. Light on the different parts of subject's face (2) would vary according to the illumination used.

"To make a direct-line meter reading of the subject in this same scene with a reflected light meter would produce

a questionable result, depending upon its orientation to different points of the scene—points not necessarily included in the area to be photographed. If the illumination is by artificial light, it will be necessary to take a reading at different points within the scene and then figure the average.

"With the invention described here, the brightness of the image or scene is examined in the camera, between the lens and the ground glass, with the aid

## Novel Aid For Exposure Meter Users

FOR YEARS PROFESSIONAL photographers have been using home-made Neutral Gray Cards for improving accuracy in exposing color film. Recently a large film manufacturer has made available a "gray card" for this purpose in an effort to simplify the use of an exposure meter for color photography. This card had to be a compromise for all the meters in the field. Even with this compromise, however, the improved reliability of the exposures obtained made it an invaluable tool.

Now Delmar Anasco Corp., makers of Delmar exposure meters, has designed and printed a special card carefully



Polka-dot exposure reading aid

designed to its Dual-Professional Exposure Meter. A totally new design makes this formerly bulky device pocket-sized for convenience. The polka-dot design was carefully computed to have the exact amount of white and black which would average out to the equivalent of an average subject. This average subject is situated half-way between the brightest and darkest subjects on a logarithmic scale.

In use, the Polka-Dot Target is held up against the subject with its flat side facing the camera. The Dual-Professional Exposure Meter is held 6" away from the center of the card and pointed at its center. The actual subject being photographed is not measured at all. In this way the colors or brilliancy of the subject do not affect the accuracy of the meter in any way.

The Target makes exposure reading simple too. With the Target, only one reading is necessary. It automatically gives the average without the photographer having to make several readings

and averaging them avoiding the ever present possibility of making a mistake.

For distant subjects, it is only necessary to hold the card upright and take an exposure-meter reading from the



May be used for close-up or distance readings

card. As long as the subject and the card are in the same light condition (both in sunshine, for example), the reading will be accurate. For closeups of small objects like flowers, the Polka-Dot Target is a real help. The angle of "seeing" of the photoelectric cell in the Dual-Professional Meter takes in a wider view than a small flower can fill, hence the meter may be reading a large area of background foliage which is unimportant. By holding the Polka-Dot Target close to the flower and reading it instead of the flower, a far more accurate exposure will be obtained.

Indoors the Target will find many uses too. Here it must be held as close to the subject as possible because the light varies from place to place rather quickly. Users of the Dual-Professional Exposure Meter may now take advantage of this well-known professional trick in obtaining easily and quickly accurate exposure for color photography.

of photo-cell probe, shown at 45 in Fig. 4. This explanation controlled by the galvanometer gives, for example, five values for the positions 1, 2, 3, 4, and 5 chosen as the principal points of reading of the image. In this way the exact light values of these different points of the scene are known and, by comparison with the curve of sensitivity of the film used, in which light densities are carried in ordinate and logarithm of luminosity in abscissa, the opening of the lens, the time of exposure, etc., can be chosen to get a more or less correct exposure in Zone II of the sensitivity curve.

"Figure 4 shows a method of employing the invention in a motion picture camera having a lens which can form an image either on sensitized film or on a ground glass located at 44, when the rays are hidden by the reflecting surface (42) carried by the shutter (43).

"The photoelectric cell (45) can be moved in front of the image formed on the ground glass (44) by means of a control button (46). A movement of the control toward the right or toward the left, the same as a movement upward or downward, produces a corresponding movement of the cell toward the upper or lower part of the image.

"For this purpose, button (46) is at the end of an arm (47) engaged in a cylindrical part which is mounted in a socket, not shown, in the interior of which the arm can pivot around the vertical axis V-VI; this piece (48) carries a fork (49), between the fingers of which a test (50) is engaged, integral with a plate (51), which is mounted in the apparatus in such a way so be able to slide transversely according to arrows F-FI; a rod (52) is integral in translation to this plate (51) and carries along with it arm (53), at the extremity of which is fixed the photoelectric cell (45).

"It should be noted that a movement of the control button in a certain direction causes cell (45) to move in the opposite direction, which to the observer appears to be a movement in the same direction. It being understood that the image is inverted.

"Arm (47) is able to pivot in the interior of piece (48) around a horizontal axis H-HI; it bears at its extremity two inclined planes (54) between which is engaged a swivel (55) fixed at the end of a small rod (56) well integral in rotation with rod 52.

Right: Moody Institute of Science Installation using Stancil-Hoffman 5-5 Magnetite Film Recorder

Below: Model S-5 Magnetite Film Recorder Back Mounted



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"When the control button (46) is raised upward, a movement is started toward the bottom of inclined planes (54) which drives wheel (55) toward the right of the figure; an extension rotation is produced in rod (52) and arm (53) draws the photoelectric cell (45) in the direction of arrow F5 which corresponds to the upper part of the image.

"The desired result is thereby obtained: the upward movement of button (56) produces a movement of the photoelectric cell (45) toward the top of the image and inversely. This cell is, of course, connected by conducting wires (58) and (59) to switches (60,

61), which are connected electrically to a galvanometer.

"Window (62) limits the movement of arm (47) in such a way that cell (45) cannot normally go beyond the limits of the image formed on the transparent glass (44); this window however has a notch (63), in which arm (47) may be engaged when there is no wish to use cell (45); this same cell is then engaged in a corresponding notch (64), outside of the field of vision.

"The system of automatic simultaneous described above has recently been tried with success and is on the way to being applied as a regular procedure in movie and television studios in Europe."

## MY COUSIN RACHEL

(Continued from Page 59)

planner behavior toward each other. It had to be implied (but could not, of course, be shown) that from this point on they were engaging in intimacies which (in that day and age, at least) were not bented about in polite conversation.

To put across this important story point so that no one could be shocked, La Shelle rigged a photographic gimmick. He utilized an optical flat several inches long, left one end clear, and covered the rest of it with progressively heavier veils of vaseline. As the camera zoomed into close-up of a kiss realistically fervid enough to leave bruises on Mrs. de Havilland, a camera assistant slid the optical flat before the camera lens from its clear position to its most heavily diffused extreme. The resultant photographic effect puts over the idea in no uncertain terms. In fact, its impact could be missed perhaps only by the most naïve.

Perhaps the most striking sequence in the film, from the visual standpoint, is that which portrays the delirium of

the male lead as he writhes about in the throes of a serious illness. The effect had to vary back and forth between seeming realism and pure fantasy. Throughout the montage the character lies on his bed in the foreground of the frame, propped to camera. During the flashes of realism, the background of his bedroom was projected on a process screen behind him, and other characters played their action toward him. For the flashes of fantasy, the main character retained his static foreground position, but the second stage behind him was filled with cross-lighted smoke, creating a white haze out of which ghostly figures seemed to materialize. The two effects were made to blend smoothly into each other by means of optical dissolves.

As part of the same sequence the hero imagines himself being married to the heroine. Clad in her wedding gown, she appears out of seeming nothingness (swirling smoke against a plain gray flat). As she comes up into close-up, the hero (until then crouched down be-

low camera fringe) rises into the scene to join her, and the camera does a 180° pan with them as the two start down the aisle toward a more-or-less realistic wedding ceremony—but here again use of the diffused optical flat lends just enough unreality to tie the scene into the montage of delirium.

The final sequence of the film takes place in a rock-filled gorge near the seashore, which is spanned by an ancient stone bridge and a makeshift wooden bridge from which Rachel falls to her death. A search of the California coast was made for just such a location. A suitable site was found, but it was decided that the fog, the varying light, and effect of the uneven pounding of waves on the sound track would have made shooting rather difficult there. Instead, the scene was reconstructed on an exterior set at the studio, a long trough or tank known as "the moat," which has been the setting for a great many water scenes in earlier Fox productions. This was filled with rocks and bridged, and completely canvassed over to exclude outside light. Two giant process screens were set up in the background, and upon these were projected scenes of huge waves crashing against the shore. The set was lighted to duplicate a bleak exterior; wind machines were started; slight fog effects were added—and the result is a perfectly controlled visual atmosphere that looks more real than the real thing.

It is not to be implied, however, that tricks and gimmicks are the elements that make the photography of "My Cousin Rachel" an outstanding example of creative lensing. It is rather the overall quality, approach and sheer technical skill of La Shelle's visionization that rates honors (Academy or otherwise) for his work on this film. It is not enough to say that his light sources are authentically motivated, because he uses shadow as well as light to create mood and to model his characters strongly.



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Nor does he lack the courage to let actors walk into partial or complete shadow from time to time, for dramatic effect.

His lighting of leading man Burt Lancaster gives this character great strength and virility, plus a pure animal force that practically leaps off the screen. It can also be said that Miss de Havilland never looked better, or more "ravishing," as the press agents like to say. She radiates sheer, unadulterated sex—a quality which must be evident if the audience is to accept some of her seemingly illogical behavior of her leading man.

For several years now, Joseph La Shelle, ASC, has been known as Hollywood's foremost exponent of the moving camera. He shoots with the camera always mounted on a small, highly maneuverable crane, lacing together a dozen or more compositions into one continuous "take" by means of fluid camera movement. This technique was evident in "Laura" (which won him an Academy award). In the magnificently photographed "Hangover Square," and in most of his other outstanding jobs of cinematography in recent years. The fact that camera movement is somewhat less extensively used in "My Cousin Rachel" is explained by him in a general discussion of his own approach to filming.

"The function of the motion picture camera is to help tell a dramatic story," he points out. "Because of this, the camera does not exist for its own sake, but is part of the framework of production set up to tell that story in the most forceful and effective way. The camera that photography calls attention to itself as a separate craft, it fails in its overall purpose."

He goes on to say: "The director of photography approaches each sequence as a new and separate problem, and he adapts his technique to suit that particular problem. The cinematographer who always uses low angles, or always uses high angles, or always moves the camera no matter what the demands of the sequence, makes the mistake of letting a set style override an individual approach to the problem. He restricts himself to a set pattern of mechanics that may not suit the dramatic situation at all."

"I like to use camera movement when it is called for to follow the action of players, and to tie situations together," he continues, "and this technique is especially effective in a modern action story where the camera adapts its pace to the pace of the dramatic action and thereby helps to keep things moving. However, in my last two pictures, 'Les Misérables' and 'My Cousin Rachel,' I used camera movement more spar-

(Continued on Page 82)

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## Columbia

- WILLIAM BRANNON, "Sagehen Trail," (Gene Autry Prod.) with Gene Autry, Stanley George Archibald, director
- CHARLES LAWTON, "Crime Does the Profit," (Technicolor) with Dick Haymes, Audrey Totter, Billy Daniels, Bill Sutton, George Raft, Cecil Kellaway, Douglas Fairley, and Larry Blake. Richard Quire, director

## Metro-Goldwyn-Mayer

- GEORGE POLLEY, "The Band Wagon," (Technicolor) with Fred Astaire, Cyd Charisse, Vincente Minnelli, director
- ROBERT SEXTON, "Mogambo," (Technicolor) with Clark Gable, Ann Sheridan, Grace Kelly and Douglas Sinden. John Ford, director
- RAY JONE, "A Slight Case of Larceny," with Mickey Rooney, Eddie Bracken, Elaine Stewart, and Marilyn Erskine. Don Weis, director
- JOSEPH KUTYPER, "Lame Horse," (Technicolor) with Lana Turner, Ricardo Montalva, John Lund, Louis Calhern, Jean Hagen, Donald Crisp, Edward Franz, Rita Moreno, and The Madrasians. Mervyn LeRoy, director
- HAN ROYCE, "Time and Fortune" with Spencer Tracy, Jean Seamon, Teresa Wright, Tony Perkins, Kay Williams, and Mary Wickes. George Luker, director
- GEORGE POLLEY, "All The Brothers Were Valiant," (Technicolor) with Robert Taylor, Stewart Granger, Elizabeth Taylor, Bette St. John, James Whitmore, Norman Wayne, and Karl Kresser. Richard Thorpe, director
- WYATT MORRIS, "Affairs of Dolores Gills," with Debbie Reynolds, Bobby Vea, Barbara Hank, and Bob Fosse. Don Weis, director

## Paramount

- LEONID LITVIN, "Here Came the Gals," (Technicolor) with Bob Hope, Tony Martin, Adele DeW, Claude Rains, director
- RAY BERNARD, "Arrowhead," (Technicolor) with Charlene Ronson, Jack Palance, Katy Jurado, Michael Rennie, Mary Mclellan, Michael Shannon, Judith Ames, and William Scott. Sherman Mays, director
- DANIEL FAY, "Unholy," with Dana Mayes, Jerry Lewis, Donna Reed, Barbara Bates, Ben Pomeroy, and Joseph Cotten. Norman Taurog, director
- LEONID LITVIN, "Salvage," (Technicolor) with Fernando Lamas, Alfred Hall, Patricia Medina, Frances O'Sullivan, Charles Kerrin, Tom Drake, John Saxon, Wilford Brimley, and Lester Matthews. Edward Ludwig, director

## Republic

- JOSEY L. RENNING, Jr., "City That Never Sleeps," with Gail Young, Mark Stevens, Ed van Arnold, Marie Windsor, and Wally Catlett. Producer-director, John H. Auer.

## AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

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- LAM GUTHRIE, "All I Desire," with Barbara Stanwyck, Richard Carlson, Margaret O'Sullivan, Richard Long, Maria Handwork, Len Nelson, and Billy Gray. Douglas Sirk, director
- REGINALD MATTY, "It Happens Every Thursday," with Lorenz Young, John Forsyth, and Robert Buchanan. Joseph Pevney, director
- WILLIAM DANIELS, "Drowning," with Tony Curtis, Jeanne Crain, and Lyle Branger. Rudolph Mate, director
- GEORGE ROBINSON, "Abbott & Costello Meet Dr. Jekyll & Mr. Hyde," with Bud Abbott, Lou Costello, Russ Kettel, Craig Stevens, and Helen Westcott. Charles Lamont, director

## Warner Brothers

- EDWIN DUFFIN, "The Seven," with Frank Lovejoy, Robert Armit, Dale Sweeney, and Victor Pinner. Lewis Seiler, director
- ROBERT BORDO, "The Great Mouse Story," (Technicolor) with Kathryn Grayson, Walter Abel, Mary Griffin, Ann Dunn, and Rosemary Delany. Gordon Douglas, director
- WILLIAM CULLEN, "Calamity Jane," (Technicolor) with Doree Day, Howard Keel, Allyn McLane, Bink, Wesson, and Philip Carey. David Butler, director
- ED DUFFIN, "The Eddie Cantor Story," (Technicolor) with Keefe Branniff, Marilyn Erskine, Alan McAlpin, Gerald Mohr, Arthur Fink, Mel Rogers, Jr., and William Turner. Alfred E. Green, director
- TIM MCCOY, "Sally See," with Ben Lescarot, Virginia Mayo, and Hayden Rorke. Arthur Lubin, director

## Independent

- JAMES WOOD BOWY, "Main St. To Broadway," (Cinema Products) with Teddik Black, head, Elvira de Blonfeld, Faye Emerson, H. Fonda, H. Harrison, H. Martin. Tay Garnett, director
- HARRY STRAIN, "A Lamp Is In The Street," (Cinema Prod.) (Technicolor) with James Cagney, Barbara Hale, Ann Fienberg, Len Chancer, Jr., Frank McHugh, Mickey Simpson, John McMillan. Reed Walsh, director
- JOSEY SUTTE, "Pan Alamo," (Eric Prod.) with Yvonne De Carlo, and Carlos Thompson. Lesley Selander, director
- BENJAMIN KLEIN, "No Escape," (Matheson Prod.) with Lee Remick, Sonny Tufts, Marie Perle, Debbie Green, Robert Carson, Barbara Morrissey, and Vincent McBoyle. Charles Bennett, director
- EDWARD LAMON, "The Moon Is Blue," (Preminger-Herbert Prod.) with William Holden, David Niven, Maggie McNamara, Dana Andrews, Tom Tully, and Fats Domino. Otto Preminger, director
- STANLEY CARLIS, "The Wonderful Year," (Winning-Pollack Prod.) with Richard Crane, Robert Shaw, and Doro Merande. E. A. Dupont, director

## 20th Century-Fox

- HARRY WAIN, "Gentlemen Prefer Blondes," (Technicolor) with Jane Russell, Marilyn Monroe, Charles Coburn, Elliott Reid, and George Wendall. Howard Hawks, director
- CHARLES C. CLARKE, "Fighting Temeraire," (Technicolor) with Jeanne Crain, Dale Robertson, Richard Boone, Carl Matheson, and Carl Eise. Harmon Jones, director
- LEON SEAMON, "White Wash Duster," (Technicolor) with Susan Hayward, Robert Mitchum, Walter Slezak, Henry Hathaway, director
- JOSEPH DEBELLA, "Bucktown Crossing," with Jeanne Crain, Casey Adams, and Carl Eise. Joseph M. Newhouse, director

## Universal-International

- CHARLES BUTLER, "The Sand at Apache Point," (Technicolor) with Stephen McNally, John Adams, Hugh Marlowe, Hugh O'Brian, Russell Johnson, and Judyne Garma. Lee Sholin, director



## 'MY COUSIN RACHEL'

(Continued from Page 87)

ingly—though not consciously so—for the simple reason that both of these films were period pieces. To have used extensive camera movement would have forced into them an artificially "modern" pace out of key with the periods and locales."

With Academy Awards time practically upon us again, it is a certainty that one of the leading contenders for the black-and-white cinematography award will be Joseph La Shelle for his masterful lighting and camera treatment of "My Cousin Rachel."

## WHAT'S NEW

(Continued from Page 56)

weight, and compactness are important features claimed for the equipment in addition to its prime qualifications of flutter-free motion, wide-range response spectrum, high dynamic range, clean distortion-free sound, and maintenance-free operation.

Comprehensive technical data sheet may be had by writing either Camera Equipment Company, or Magnascope, P. O. Box 707, North Hollywood, Calif.

**Expansion For Kinevox**—Kinevox, Inc., 116 So. Hollywood Way, Burbank, manufacturer of the Kinevox portable synchronous magnetic film recorder and associated equipment, has purchased additional ground adjoining its present factory and will erect an addition to its present building to take care of its expanding business.

Company has recently developed several new items of film and TV production equipment, including an automatic film slider, closed-circuit television camera chain with remote control, and a compact portable tape recorder about the size of a small portable radio, for reportorial and interview recording.

**Effects, Titles and Miniatures**—Ray Meier & Company, 4261 Normal Ave., Hollywood 29, Calif., announces a step-by-step production program which will enable company to accommodate the increasing needs of independent film producers and makers of TV films for special photographic effects, titles and miniature work. Company currently is supplying most of the major TV film products in Hollywood with special effects, footage and title work.

Company has available an interesting comprehensive chart showing all the

optical effects designs which it makes available, plus containing technical data of value to film makers. Copies are available free by writing the company.

**Wiggin Exposure Meter**—Camera Specialty Company, 50 West 29th Street, New York 1, N. Y., announces it has started production of the Wiggin exposure meter for still and movie cameras. This meter is probably the smallest extinction type meter ever made—measures barely over one inch long and slightly more than  $\frac{1}{4}$  inch wide. A folding book-type cover completely shields the meter for storing and against dust. The Wiggin exposure meter gives complete readings in one operation. Diaphragm readings are from  $F/2.8$  to  $F/32$ . Speeds are from 1/500 to 8 seconds. The Wiggin exposure meter retails for \$2.25.

## BULLETIN BOARD

(Continued from Page 56)

operative cameramen to the regular crew of five on 3-D feature shooting.

The companies owning the 3-D camera equipment, which is leased to producing companies, on the other hand wish to provide their own 3-D technicians to assist in the calculations which they claim is necessary for each shot in 3-D cinematography.

**THE ABC LOST THREE** members last month through the deaths of Gordon Jennings, Jerome Ash, and Joseph DuBray.

Gordon Jennings, 56, was head of Paramount Pictures special effects department and winner of six Academy Technical Awards. He died January 11 at Lakeside Country Club, Hollywood while playing golf.

Ash, a veteran cinematographer who retired recently after 20 years at Universal-International Studios, died in San Francisco January 5th.

Joseph DuBray passed away recently in France, in a small town near Paris. He retired from active photography in 1947. Until his death he had continued his membership in the ASC as a non-resident member. At one time he was associated with the Bell & Howell Company as Western District Manager.

**WINTON HOCH, ASC**, last month was signed by Cinerama Productions to a term contract involving his services as a producer, director and cameraman. The company is currently preparing its first Hollywood production using the Cinerama cameras.



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